

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF TEXAS
DALLAS DIVISION

MAY - 9 2011

CLERK, U.S. DISTRICT COURT
By H. F.
Deputy 4:52 p.m.

GENERAL ELECTRIC COMPANY,
Plaintiff,

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Case no. 3:10-cv-276-F

v.

MITSUBISHI HEAVY INDUSTRIES,
LTD. ET AL.,
Defendants.

CLAIM CONSTRUCTION ORDER

BEFORE THE COURT are the Notices of Opening Claim Construction Briefs of Plaintiff General Electric Company (“GE”) (Docket No. 84) and Defendants Mitsubishi Heavy Industries, Ltd., Mitsubishi Heavy Industries America, Inc., and Mitsubishi Power Systems Americas, Inc. (“Mitsubishi”) (Docket No. 86), as well as the respective Responses of GE (Docket No. 90) and Mitsubishi (Docket No. 93). These filings concern the construction of claims involved in the patents at issue in this litigation: United States Patent Nos. 6,879,055 (“the ‘055 patent”) and 7,629,705 (“the ‘705 patent”). A claim construction hearing was held on March 1, 2011. In this Order, the Court construes disputed language in the Claims 1 and 3 of the ‘055 patent and Claim 1 of the ‘705 patent.

I. Background

The United States Patent and Trademark Office (“PTO”) issued the ‘055 patent and the ‘705 patent to GE on April 12, 2005 and December 8, 2009, respectively. Both patents concern technology related to wind turbines, which are large machines that turn wind energy

into electrical energy. The machines themselves consist of several blades attached to a nacelle, which sits upon a tower. Within the nacelle is a rotor and generator, into which the energy is transmitted. At the base of the tower is a frame that supports the turbine, which contains some of the electrical equipment necessary to generate power. The turbine itself is connected to a power grid. The power is transmitted through power lines at high voltages in an alternating current form to a substation on the grid, which then distributes the power to various structures.

The '055 patent, entitled "Base Frame for Mounting the Shaft of the Rotor of a Wind Power Plant onto the Plant Tower," concerns the base frame that supports wind turbines. As wind power plants have developed and generated more power, the dimensions and weight of the machine housing and its components have become larger. Due to their increased size and weight, the transportation and assembly of base frames has become increasingly difficult. The '055 patent provides for a base frame that is divided into upper and lower parts, which can be transported to a construction site with less difficulty and can be more easily assembled by the manufacturer. At the construction site, the lower part of the base frame can be mounted onto the tower, and the upper part of the base frame can be mounted onto the lower part. The parties have essentially narrowed their dispute to a single term, "connection point," which they have asked the Court to construe

The '705 patent, entitled "Method and Apparatus for Operating Electrical Machines," consists of a method of allowing an electrical machine, such as a wind turbine, to remain

connected to its utility grid during voltage fluctuations. The voltage fluctuations themselves take place on the electrical grid, which acts to carry energy from the wind turbines to the eventual recipients of the energy produced. The voltage fluctuations cause the flow of electricity to decrease to a low voltage range, at times approaching zero volts. The fluctuations can be caused by outside factors which affect the power converters and generator and at times can cause the wind turbine to disconnect from the utility grid. Examples of incidents that could cause such fluctuations on the grid that were provided by the parties include lightning strikes, powerful wind gusts, falling trees, or even an excessive draw of power, such as extensive use of air conditioning on a hot day by structures connected to the grid. The '705 patent allows the machine to remain connected to the utility grid despite these voltage fluctuations and provides a method for a return to normal voltage levels upon the restoration of grid voltage to less volatile levels. Prior art discussed at the *Markman* hearing¹ allowed wind turbines to remain connected to the power grid when the voltage dipped to very low levels. The allegedly important and unique feature of the '705 patent, as compared to

¹The concept of a *Markman* hearing derives from the Supreme Court's decision in *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996), in which the Court held "that the construction of a patent, including the terms of art within its claim, is exclusively within the province of the court." *Id.* at 372. "The purpose of a *Markman* hearing is for the court and the parties to settle conclusively on the interpretation of disputed claims." *Novartis v. Teva Pharms. USA, Inc.*, 565 F. Supp. 2d 595, 603 (D.N.J. 2008). "A *Markman* hearing encompassess pre-hearing briefs, a chart of the claim constructions advocated by each party, declarations of experts, and oral argument for both sides, designed solely for the purpose of determining proper construction of a patent." *Road Sci., L.L.C. v. Cont'l W. Transp. Co., Inc.*, No. CIV. S-09-2023 FCD/GGH, 2009 WL 4928373, at *6 (E.D. Cal. Dec. 14, 2009).

some of this prior art, is that this method allows the turbine to remain connected to the grid when the flow of voltage decreases to zero, allegedly improving upon this past technology.

On February 11, 2010, GE filed this suit against Mitsubishi, alleging that Mitsubishi was infringing upon the '055 and '705 patents. GE and Mitsubishi have been involved in multiple suits against one another regarding the infringement of various patents related to wind turbine technology. GE is asserting Claims 1 and 3 of the '055 patent, and Claim 1 of the '705 patent.²

II. Applicable Law

“A claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using or selling the protected invention.” *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1340 (Fed. Cir. 1999) (quoting *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257 (Fed. Cir. 1989)). A patent infringement analysis generally entails two steps. “The first step is determining the meaning and scope of the patent claims asserted to be infringed. . . . The second step is comparing the properly construed claims to the device accused of infringing.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc) (citing *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 821 (Fed. Cir. 1992)) (aff’d in *Markman v.*

²On February 11, 2011, GE indicated that it was seeking to amend its preliminary infringement contentions and assert Claims 9 and 13 of the '705 patent. However, at a previous hearing, the Court and the parties decided to proceed with the March 1, 2011 *Markman* hearing to consider the infringement contentions initially asserted by GE against Mitsubishi.

Westview Instruments, Inc., 517 U.S. 370 (1996)). The first step, generally known as claim construction, is a matter of law to be determined by the Court. *Markman*, 52 F.3d at 977-79. “It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004).

To ascertain the meaning and scope of a disputed claim term, the Court primarily looks at the intrinsic evidence of record, including the words of the claims themselves, the specification, and the prosecution history. *Markman*, 52 F.3d at 979. In construing claims, the courts may not rewrite claim language but rather give effect to the claims chosen by the patentee. *See Helmsderfer v. Bobrick Washroom Equip’t Inc.*, 527 F.3d 1379, 1383-84 (Fed. Cir. 2008). Generally claims should be given their ordinary meaning as understood by a person having ordinary skill in the art. *Hockerson-Halberstadt, Inc. v. Avia Group Intern.*, 222 F.3d 951 (Fed. Cir. 2000). A term must be read in context of its particular claim as well as in context of the entire patent, including the specification. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en banc).

The words of a claim “are generally given their ordinary and customary meaning.” *Vitrionics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). “[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Phillips*, 415 F.3d at 1313. For some cases, “the

ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of widely accepted meaning of commonly understood words.” *Phillips*, 415 F.3d at 1314 (citing *Brown v. 3M*, 265 F.3d 1349, 1352 (Fed. Cir. 2001)). The Court may look to general dictionaries in such cases. *Phillips*, 415 F.3d at 1314. However, where determining the ordinary and customary meaning of a claim requires examination of terms that have a particular meaning in a field of art, the Court also looks to extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art. *Id.*; *Innova*, 381 F.3d at 1116. Such evidence is to be used for the Court’s understanding of the patent, and not to vary or contradict the terms of the claims. *Markman*, 52 F.3d at 981.³

As part of its review of the intrinsic evidence, the Court also looks to the patent’s specification. A term must be read in the context of its particular claim as well as in the context of the entire patent, including the specification. *Phillips*, 415 F.3d at 1313. The specification is “highly relevant,” and the Federal Circuit has identified it as “the single best guide to the meaning of a disputed term.” *Vitrionics*, 90 F.3d at 1582. “The descriptive part of the specification aids in ascertaining the scope and meaning of the claims inasmuch as the words of the claims must be based upon the description. The specification is, thus, the

³Although expert witness testimony may be considered in the claim construction process, *Phillips*, 415 F.3d at 1317, the parties agreed amongst themselves not to call expert witnesses or offer expert declarations. Pl.’s Br., Docket No. 84, at 2 n.2.

primary basis for construing the claims.” *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 452 (Fed. Cir. 1985). The importance of the specification therefore reflects its statutory requirement to describe the claimed invention in “full, clear, concise, and exact terms.” 35 U.S.C. § 112, ¶ 1. “A fundamental rule of claim construction is that terms in a patent document are construed with the meaning with which they are presented in the patent document. Thus claims must be construed so as to be consistent with the specification, of which they are a part.” *Merck & Co. v. Teva Pharms. USA, Inc.*, 347 F.3d 1367, 1371 (Fed. Cir. 2003).

The Federal Circuit has also directed that courts should consider the prosecution history of a patent in construing a claim. *Phillips*, 415 F.3d at 1317; *see also Graham v. John Deere Co.*, 383 U.S. 1, 33 (1966). The prosecution history “consists of the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent.” *Phillips*, 415 F.3d at 1317. The prosecution history can assist the Court in determining how the inventor and the PTO understood the patent. *Id.* However, while the prosecution history is valuable to the Court’s construction of a claim, its nature as an ongoing negotiation between the PTO and the inventor causes it to lack the clarity of the specification. *Id.*; *Athletic Alternatives, Inc. v. Prince Mfg., Inc.*, 73 F.3d 1573, 1580 (Fed. Cir. 1996). Therefore, due to its potential for ambiguity, the prosecution history is less useful than the specification for claim construction purposes. *Phillips*, 415 F.3d at 1317.

III. Disputed Terms

A. *The '705 Patent*

The '705 patent is entitled "Method and Apparatus for Operating Electrical Machines." The '705 patent claims a method that allows a wind turbine to remain connected to its utility grid despite the presence of voltage fluctuations that cause the voltage to approach low- or zero-flow levels.

The parties specifically contest the meaning of some of the language of Claim 1 of the '705 patent. Claim 1 reads as follows:

1. A method for operating an electrical machine, said method comprising:

coupling the electrical machine⁴ to an electric power system such that the electric power system is configured to transmit at least one phase of electric power to the electrical machine; and

configuring the electrical machine such that the electrical machine remains electrically connected to the electric power system operating outside of a predetermined range for an undetermined period of time, said configuring the electrical machine comprising:

electrically coupling at least a portion of a control system to at least a portion of the electric power system;

coupling the control system in electronic data communication with at least a portion of the electrical machine; and

configuring the electrical machine and the control system such that the electrical machine remains electrically connected to the electric power

⁴The parties have agreed that the construction of the term "electrical machine" should be "a device that can convert mechanical energy to electrical energy or electrical energy to mechanical energy." P.R. 4-5(c) Joint Claim Construction Chart, Docket No. 97, Ex. A.

system during and subsequent to the voltage amplitude of the electric power system decreasing below the predetermined range including approximately zero volts for the undetermined period of time, thereby facilitating zero voltage ride through (ZVRT).

U.S. Patent No. 7,629,705, Docket No. 85-1, at 20, col. 11:41-67 (emphasis added). The Court must construe both portions of text highlighted above.

Before delving into the true dispute between the parties, the Court shall address other details that will frame the Court's claim construction analysis. First, within the disputed portions of the claims, the parties have reached agreement on one of the terms in need of agreement: "predetermined range." In their briefing, the parties argued for different constructions of this term; however, counsel for both parties informed the Court at the *Markman* hearing that they had come to an agreement, and that GE was prepared to accept Mitsubishi's construction of a "predetermined range" as a "defined range." This construction reflects the fact that the range is pre-set when the machine is configured. The Court appreciates the fact that counsel for the parties have maintained an effective relationship and have shown a willingness to communicate. Such commendable conduct allows the Court to simplify the issues under consideration.

Second, the parties have also disputed the presence of the "thereby" clause within the second disputed portion of Claim 1, which concludes with the phrase, "thereby facilitating zero voltage ride through (ZVRT)." Upon looking at the language of this claim, it is the opinion of the Court that inclusion of the "thereby" clause will have no effect on the scope and interpretation of the claim. *See McClarin Plastics, Inc. v. LRV Acquisition Corp.*, 215

F.3d 1343, 1999 WL 507188, at *2 (Fed. Cir. 1999) (“The normal rule is that a ‘whereby’ or ‘thereby’ clause that ‘merely states the result of the limitations’ in a claim does not limit the scope of the claim.”) (quoting *Texas Instruments, Inc. v. United States Int’l Trade Comm’n*, 988 F.2d 1165, 1172 (Fed. Cir. 1993)). Therefore, the Court shall include the “thereby” clause within its construction.

Taking these developments into account, the true nature of the dispute between the parties regarding both excerpts at issue goes to the construction of the term “undetermined period of time.” GE proposes that an “undetermined period of time” should be construed as “a time period not determined in advance.” By contrast, Mitsubishi proposes that an “undetermined period of time” should consist of a period of time when the machine remains connected to the electric power system when the voltage is outside the range that has “no time limits.” In essence the nature of the dispute comes down to whether an “undetermined period of time” is with or without limits. GE advocates a construction that implies that such a period is limited; by contrast, Mitsubishi’s construction would promote an interpretation of the language that would encompass a time period that would have no upper limit and could be indefinite.

To determine how “undetermined period of time” should be construed, the Court shall consider the words of the claims themselves, the specification, and the prosecution history. *Markman*, 52 F.3d at 979. In this case, the words of the claim itself do not provide significant guidance in construing “undetermined period of time.” In any case, the dispute

between the parties concerns the potential breadth of the period, not its connection to the broader claimed process as a whole.

The Court next looks to the '705 patent's specification. From the specification, it appears that the '705 patent's purpose was to allow for the machine to stay connected to the system during a voltage fluctuation. By their nature, the occurrence and duration of voltage fluctuations depends upon outside circumstances, and the amount of time taken for the voltage flow to return to normal in the wake of a fluctuation also depends upon the circumstances. Describing an example of this process regarding the graph in Figure 3, the specification provides,

In the exemplary embodiment, the zero voltage condition on bus 242 is 0.15 seconds whereas the voltage on bus 242 fully recovers to 100% at approximately 3.5 seconds after the initiation of the transient. Alternatively, a length of time of the zero voltage condition and the characteristics of a grid voltage recovery *depend upon a variety of factors known in the art.*

17, col. 6:30-37 (emphasis added).

This and other passages within the '705 patent indicate to the Court that the duration of a voltage fluctuation cannot be effectively determined beforehand because the causes of fluctuations are varied and random. As noted by counsel for both parties at the *Markman* hearing, disruption to the level of voltage flowing at any given time can range from a matter of seconds, such as when there is a lightning strike, to much longer periods, such as when a tree or branch falls and disrupts or damages the power lines. The time it takes to effectuate a return to a normal voltage level depends on the circumstances of the cause of the

disruption, and cannot be known unless looking at all of the factors surrounding the incident in question. The apparently unique nature of the '705 patent is to maintain the connection to the grid during these fluctuations. Because it is impossible to know the duration of the voltage fluctuation without looking at the circumstances taking place during the fluctuation, simply construing the disputed language as a time period "not determined in advance" does not adequately encompass the nature of the problem the '705 patent aims to correct because that time period can vary greatly depending on the situation.

GE's proposed construction of "a time period not determined in advance" implies that a time period could possibly be determined or predicted beforehand, when the specification of the '705 patent indicates that the amount of time is based on variables and therefore could not be determined in advance. The Court therefore agrees with Mitsubishi's contention that the "undetermined period of time" reflects the specification's indications that the period of time was "undetermined" because the amount of time for the grid voltage to be restored depends upon the situation and factors surrounding the fluctuation. Thus, it would be appropriate for the Court to adopt a construction indicating that Claim 1 establishes that the amount of time is undeterminable in advance and can only be known based upon the fluid factors of the situation.

The Court is of the opinion that Mitsubishi's construction of "an undetermined period of time" as a time period with "no limits" more accurately reflects the detailed description of the invention in the '705 patent's specification. According to the specification, the period

of zero-voltage ride or low-voltage ride ends upon the “restoration of grid voltage.” ‘705 patent, col. 11:1-4. This indicates that the time period itself reflects conditions, not preset or established amounts of time. Furthermore, it appears to the Court that the “undetermined period time” refers to an amount of time that the normal flow of voltage will be interrupted or altered, not to the amount of time it takes to restore a certain level of voltage in the connection. As this time period is determined by factors that could act upon the grid, a construction reflecting the uncertainty of the length of the zero-voltage condition would be appropriate.

Ultimately, the Court agrees in part with GE’s proposed construction and in part with Mitsubishi’s proposed construction. GE’s concerns that a period of time with “no time limits” could imply that there could be an indefinite period of continued connection is justified. As recounted above, the specification indicates that the “period of time” that the machine remains connected is meant to address voltage fluctuations that arise according to circumstances prompted by a number of external variables. These fluctuations, however, appear to be temporary, and the purpose of the ‘705 patent is to continue connectivity in the specific context of these occurrences which are temporary by nature. A construction containing “no time limits” would not reflect the temporary nature of the voltage fluctuations and the period of continued connectivity that the ‘705 patent is intended to promote. Not taking such language into account could broaden the patent beyond the original intention of the inventor and the PTO. Furthermore, while the time period in question is most affected

by the variables facing the machine, there is nothing within the patent's specification that indicates that the period of continuing connectivity is "indefinite," as Mitsubishi proposes.

The prosecution history also indicates that the voltage fluctuations considered by the PTO and the inventor were of a temporary nature. In its considerations, the Patent Examiner used an earlier GE patent application, U.S. Patent Application No. 2004/0145188, referred to as the "Jannsen Application." The Jannsen Application similarly shows that the power fluctuations, classified as taking place for an "undetermined period of time," were postulated to be brief occurrences, after which the voltage returns to normal. GE's Br., Docket No. 84, at 16-17. The '705 patent used a similar construction, and the example within the '705 patent similarly provided that the fluctuations at issue were brief, not indefinite. While no time limit for the fluctuations can be determined, neither were they contemplated to last indefinitely. Therefore, the Court is of the opinion that any construction should reflect that the time period, while unable to be determined beforehand, is coupled to occurrences that by their nature are not indefinite.

In sum, the Court agrees with GE that the "undetermined" period of time refers to the voltage fluctuation taking place on the grid itself, not within the connection between the grid and the wind turbine. The voltage fluctuation and accompanying period of time could have a number of different causes, ranging from a lightning strike to a tree falling on power lines, and the duration of that fluctuation could be from mere seconds to hours at a time. The duration depends on the nature of the disturbance on the grid, and the length of that duration

cannot be determined in advance. Accordingly, the Court adopts a construction that reflects a complete lack of predictability of the period of time at issue. The Court therefore shall construe “an undetermined period of time” as “an indeterminable or unknowable period of time.”

The first disputed portion is therefore construed as “setting up the electrical machine such that the electrical machine remains connected to the electric power system during and subsequent to the voltage amplitude operating outside of a defined range for an indeterminable or unknowable period of time.”

The second disputed portion is construed as “setting up the electrical machine and the control system such that the machine remains electrically connected to the electric power system during and subsequent to the voltage amplitude of the electric power system decreasing below the defined range, including approximately zero volts, for an indeterminable or unknowable period of time, thereby facilitating zero voltage ride through (ZVRT).”

Notably, the Court has not adopted either party’s proposed construction in full. If either party feels that the Court has done some damage to the language of the patent by way of its construction of the disputed language of Claims 1 and 3 of the ‘705 patent, that party shall be permitted to file a Motion for Reconsideration within **14 days** of the date of this Order.

B. The '055 Patent

The '055 patent is entitled "Base Frame for Mounting the Shaft of the Rotor of a Wind Power Plant onto the Plant Tower." This patent claims a two-piece base frame for a wind turbine, upon which the turbine itself is to be mounted. The frame consists of an upper part, which carries the drive train, and a lower part, which carries the azimuthal drive. The division of the base frame into two parts allows for easier transportation and construction. These two parts are joined at what the language of the '055 patent terms a "connection point." The Abstract of the '055 patent specifically mentions this term, noting, "Both parts are pre-assembled at the factory, set onto the tower, and screwed tight onto each other at their **connection point**." U.S. Patent No. 6,879,055, Docket No. 85-1, at 1 (emphasis added).

The parties dispute the meaning and scope of "connection point" in Claims 1 and 3 of the '055 patent.⁵ Claim 1 of the '055 patent claims:

1. An apparatus, comprising:

A base frame⁶ for the arrangement of a drive train,⁷ which is driven by a wind-driven rotor of a wind power plant, on the power of the wind power plant on which the base frame is affixed with an essentially horizontal orientation of the

⁵The term "connection point" appears in Claims 1-4, 6, 13, and 15-17 of the '055 patent. For the purposes of this Order and the accompanying *Markman* hearing, GE has not asserted claims 2, 4, 6, 13, or 15-17.

⁶The parties have agreed that the construction of the term "base frame" should be "a support structure that carries the drive train and the azimuthal drive device." P.R. 4-5(c) Joint Claim Construction Chart, Docket No. 97, Ex. A.

⁷The parties have agreed that the construction of the term "drive train" should be "a wind turbine rotor hub, rotor shaft and an electric generator connected through a gear(s)." P.R. 4-5(c) Joint Claim Construction Chart, Docket No. 97, Ex. A.

rotor axis of the tower and is constructed from a discrete upper part that carries the drive train and a discrete lower part that has an azimuthal drive device that is attachably joined with the upper part at a **connection point**, wherein the lower part provides for azimuthal rotation around the essentially vertical axis of the tower, wherein the **connection point** extends along an essentially horizontal cross-section that has a larger dimension in the direction of the rotor axis than in the direction perpendicular to that.

U.S. Patent No. 6,879,055, Docket No. 85-1, at 7 (emphasis added).

Claim 3 of the '055 patent claims:

3. The apparatus according to claim 1, wherein the **connection point** of both the upper part and the lower part extends in a plane extending parallel to the rotor axis and perpendicularly to the tower axis.

Id. at 8 (emphasis added).

GE's proposed construction of the term "connection point" in these claims is "area of contact between the upper part and lower part of the base frame." P.R. 4-5(c) Joint Claim Construction Chart, Docket No. 97, Ex. A. Mitsubishi's proposed construction of the term is "the point where the lower part and upper part are joined together to form the base frame."

Id.

GE contends that the term "connection point" in fact refers to an "area" in which the upper and lower parts of the base frame contact, rather than a more specific "point." The Court is of the opinion that "area of contact" is a more accurate adoption of the term "connection point." The language of the claim itself describes the "connection point" as "extend[ing] along an essentially horizontal cross-section that has a larger dimension in the direction of the rotor axis than in the direction perpendicular to that." *Id.* at 7. A term that

describes something that “extends” could not properly be described with a term that would imply a single mathematical point.

Furthermore, the patent specification’s image of the connection point shows an elongated shape on which there are a number of holes in which the two parts of the base frame are bolted together. For example, the “connection point” is at one point described as “extend[ing] along an essentially horizontal cross-section.” U.S. Patent No. 6,879,055, Docket No. 85-1, at 7, 6:60. Claim 3 notes that the connection point “extends in a plane.” U.S. Patent No. 6,879,055, Docket No. 85-1, at, 8, 7:7. The elongated nature of the connection point supports GE’s construction of an “area of contact” because there is a broad space at which the two parts of the base frame connect.

The connection point consists of a number of holes in which the two parts of the base frame can be connected by bolts, screws, or other mechanisms. Furthermore, the image of the connection point provided in the ‘705 patent’s specification contains a space around the holes in which the bolts or screws connect the two parts of the base frame. To the Court, this suggests that the term “connection point” is meant to encompass the broader area at which the two parts are joined. The “connection point” therefore consists of an area that allows the two parts to be connected. Accordingly, a construction of “area of contact” would be more appropriate in this case.

Mitsubishi argues that the “area of contact” construction should be rejected because it would broadly encompass any area at which the two parts of the base frame touch.

However, upon viewing the term “connection point” in the context of the entire claim, the Court is of the opinion that a construction of “connection point” as an “area of contact” would not have the broad connotation suggested by Mitsubishi. *See V-Formation, Inc. v. Benneton Grp., SpA*, 401 F.3d 1307, 1310-11 (Fed. Cir. 2005) (noting that a court must look at a term in the context of the intrinsic record, including the language of the claim itself). Although “area of contact” does not necessarily connote “connection” on its own, the term “connected” is present earlier in the claim. Accordingly, a construction containing multiple references to “connecting” or “connection” would be redundant. Further, this language indicating “connection” elsewhere in the claim limits its scope; as the Court views the claim as a whole, such a construction indicates that an “area of contact” is limited to the area at which the two parts of the base frame “connect.”

The Court must also look at the specification of the ‘055 patent to discern the meaning of “connection point” in the context of the invention and the field of art. *Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1379-80 (Fed. Cir. 2006); *see also Phillips*, 415 F.3d at 1315 (noting that the specification is “the single best guide to the meaning of a disputed term”) (quoting *Vitrionics*, 90 F.3d at 1582)). The specification’s description of how the ‘055 patent is used in the construction of a new wind power plant further supports the construction of “connection point” as referring to a point where the upper and lower parts of the base frame are joined together. The specification provides:

Both the upper part including the two supports and the lower part are pre-assembled in the manufacturer’s factory, completely or in part, with the

components to be allocated to them, in particular, the shaft, the gear, the generator and the azimuthal drive. The two pre-assembled units are transported to the construction site. There, the lower part is lifted onto the tower and connected to its upper end, then the upper part is set onto the lower part *and screwed down at the connection point with the lower part.*

U.S. Patent No. 6,879,055, Docket No. 85-1, at 7, 6:3-12 (emphasis added) (reference numbers omitted). The specification thus identifies the “connection point” as where the upper part is “screwed down” to connect it with the lower part. The process of “screwing” the parts together, however, involves multiple screws placed in multiple points in a broad range of space. This clearly indicates that “connection point” refers to an “area.”

GE also notes that the specification describes Figure 4 of the ‘055 patent as “a view of a connection point between a lower and an upper part of the hollow body of the base frame shown in FIG. 1 to 3.” U.S. Patent No. 6,879,055, Docket No. 85-1, at 7. GE claims that this description interprets “connection point” as encompassing the entire area of a “ring” at which the parts of the base frame connect. By GE’s construction, “connection point” is therefore best defined as a full area where the two parts make contact and connect. The Court finds this interpretation convincing. Furthermore, Figure 4 shows a view of the “connection point” in a particular shape, the specification describes it as showing “the contour of the connection point.” *Id.* at 7, 5:20. If the connection point as described in Figure 4 possesses a specific shape and “contour,” then it would best be described as an “area.”

The Court is also convinced that Mitsubishi’s construction of the “connection point” as where the two parts of the base frame are “attachably joined” would be redundant and

unnecessary. The Claim already provides for the “joining” of the parts together, and importing Mitsubishi’s construction would be repetitive of language elsewhere in the Claim. Construing this language to include terms indicating that the connection point is where the two parts are “attachably joined” imports limitations into the Claim, because the term “attachably” is not supported by any indications elsewhere in the patent.⁸

Accordingly, the Court construes the term “connection point” in Claims 1 and 3 of the ‘055 patent as “area of contact.”

Conclusion

As recounted above, it is ORDERED that the Claims are construed as follows:

The language “configuring the electrical machine such that the electrical machine remains electrically connected to the electric power system operating outside of a predetermined range for an undetermined period of time” in Claim 1 of the ‘705 patent is construed as follows: “setting up the electrical machine such that the electrical machine remains connected to the electric power system during and subsequent to the voltage amplitude operating outside of a defined range for an indeterminable or unknowable period

⁸The Court also looks at the patent prosecution history in its consideration of intrinsic evidence, including the record of proceedings before the PTO and the prior art cited during the examination of the patent. *See Phillips*, 415 F.3d at 1317 (citing *Autogiro Co. of Am. v. U.S.*, 384 F.2d 391, 399 (Ct. Cl. 1967)). The prosecution history can provide valuable insight into how the inventor and the PTO understood the patent and the disputed terms. *Phillips*, 415 F.3d at 1317; *Lemelson v. Gen. Mills, Inc.*, 968 F.2d 1202, 1206 (Fed. Cir. 1992). The Court does not find convincing any of the prosecution history arguments raised by Mitsubishi, and accordingly bases its construction primarily upon the first two factors.

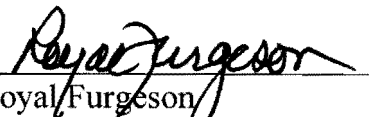
of time.”

The language “configuring the electrical machine and the control system such that the electrical machine remains electrically connected to the electric power system during and subsequent to the voltage amplitude of the electric power system decreasing below the predetermined range including approximately zero volts for the undetermined period of time, thereby facilitating zero voltage ride through (ZVRT)” in Claim 1 of the ‘705 patent is construed as follows: “setting up the electrical machine and the control system such that the machine remains electrically connected to the electric power system during and subsequent to the voltage amplitude of the electric power system decreasing below the defined range, including approximately zero volts, for an indeterminable or unknowable period of time, thereby facilitating zero voltage ride through (ZVRT).”⁹

The term “connection point” in Claims 1 and 3 of the ‘055 patent is construed as “area of contact.”

IT IS SO ORDERED.

Signed this 9th day of May, 2011.



Royal Furgeson
Senior United States District Judge

⁹As noted earlier in this Order, if either party feels that the Court has done some damage to the ‘705 patent through its construction of the claims at issue, that party shall be permitted to file a Motion for Reconsideration regarding the construction of Claims 1 and 3 of the ‘705 patent within **14 days** of the date of this Order.